Introduction

In recent years, the whole series of portable products of Apple such as iPod and iPhone have made an impact on the world. It is not difficult to explain this impact due to its attractive user interface and certain powerful elements including WiFi accessibility and Multi-touch. All the above have now become essential requirements for multimedia devices. However, the real reason for its popularity must be its simple but clear design. With this outstanding design, Apple products have become a trendy icon of the world.

We are going to apply the same concepts to develop a photo-frame though the free platform “Android”, which is provided by Google. Android is an open source platform, which is mainly used on mobile devices. This system allows users to add or remove functions depending on personal interest. All the smart effects that appeared in the iPhone can be done by the Android. All these characteristics make low cost but high technical product. This product is very user friendly and so we hope this photo-frame can create happy memories.

Aim

The aim of this project is to produce an Android-based photo-frame with touch screen, basic photo viewing function and different styles of slide shows. This product would also contain funny functions such as photo editing. Excellent internet accessibility is necessary.

Objectives

On 5th November 2007, the Open Handset Alliance was founded. This organization was combined by over 50 firms including HTC, LG, Motorola and Samsung. The next generation mobile phone of these firms would use Android as the core operating system. So far, there are more Android phones produced by different firms than the start of this project. Besides the three famous Android phones of HTC (G1, Magic, and Hero), Acer has produced their first Android phone, Acer Liquid. Motorola has also released, Milestone, the first Android 2.0 phone in the world. We can see a big trend of using Android has already appeared. There will be even Android netbooks/notebooks. As the applied area of Android is so wide, the future of working with this system is definitely bright so that we joined the development of Android devices in this early stage of the Android life cycle.

Methodology

Smart (Google) Android Photo Frame with Wireless Connectivity (AO1b-09)

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Hardware Porting Flow
Software Design Flow

Results

Sense wireless network
Access to HKUST webpage

Graphical User Interface (GUI)

Specifications

- Port Android 1.5 on the development board, DevKit 8000
- Wireless connectivity
- File type: JPEG/PNG/BMP
- Photo viewing (Slide show: 5 types of effects E.g.: Auto, Alpha, Rotate, Scale, Translate)
- Photo editing
- Facebook connecting

Conclusion

The main problem in this project is the lack of knowledge of embedded system. In the future, we hope to know more about the Linux kernel, the development difficulties will become lower.